

REMARKS

Reconsideration of the above-identified patent application in view of the present amendment and the following remarks is respectfully requested.

This amendment amends claims 1, 5, 6, and 8, cancels claims 4 and 7, and adds new claims 12-14. The amendment to claims 5 and 6 overcomes the 35 U.S.C. §112, second paragraph rejection. New claim 12 is claim 4, which was indicated as allowable, rewritten in independent form.

The M.P.E.P. sets forth the criteria for a rejection for obviousness as follows:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

See, MPEP § 706.02(j) citing In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is respectfully submitted that claim 1, as amended, patentably defines over Borman, U.S. Patent No. 3,789,865, Luibrand, U.S. Patent No. 5,505,276, and Bullard et al., U.S. Patent No. 3,886,814, whether taken singularly or in combination. Claim 1, as amended, recites a filter for

filtering the hydraulic fluid pumped to the automatic transmission and to the steering gear. None of Borman, Luibrand, or Bullard et al. teaches or suggests a filter for filtering the hydraulic fluid pumped to the automatic transmission and to the steering gear in combination with the other recited structure. Thus, it is respectfully requested that claim 1 be indicated as allowable.

Claims 2-3 depend from claim 1 and are allowable for at least the same reasons as claim 1.

Claim 8, as amended, recites a method including the step of filtering the hydraulic fluid pumped between the reservoir and the automatic transmission and the hydraulic fluid pumped between the reservoir and the fluid motor. Claim 8 is allowable for reasons similar to claim 1. Therefore, it is respectfully requested that claim 8 be indicated as allowable.

Claims 9-11 depend from claim 8 and are allowable for at least the same reasons as claim 8.

As stated above, new claim 12 is allowable claim 4, rewritten in independent form.

New claim 13 includes the subject matter of previously rejected claim 2. Claim 2 was rejected under 35 U.S.C. §103 as obvious over Borman in view of Luibrand in view of Bullard et al. in further view of Few et al., U.S. Patent No. 6,035,903. It is respectfully submitted that this rejection is improper and that claim 13 is allowable.

Claim 13 recites that the at least one pump comprises a transmission fluid pump connected with the reservoir for pumping hydraulic fluid between the reservoir and the

automatic transmission at a relatively low pressure, and a power steering pump connected with the reservoir and separate from the transmission fluid pump for pumping hydraulic fluid between the reservoir and the fluid motor at a relatively high pressure. None of Borman, Luibrand, Bullard et al., or Few et al. teaches or suggests two pumps, a transmission fluid pump and a power steering pump, connected with a single reservoir. Borman teaches a single pump 42 to provide fluid to a fluid system so that pressure is great enough for the desired operation of the fluid system. (Borman, Col. 2, lines 35-38). In rejecting previous claim 2, the Office Action stated that Luibrand teaches a pump for supplying fluid to a power steering gear and Bullard et al. teaches a pump for supplying fluid to an automatic transmission. Therefore, one of ordinary skill in the art would modify the reservoir of Borman to include both a power steering pump and an automatic transmission pump. However, this modification of Borman is improper. First, neither Luibrand nor Bullard et al. teach or suggest a reservoir that may be used for multiple hydraulically powered systems. Thus, in Luibrand and Bullard et al. each pump has a dedicated reservoir. Additionally, Borman teaches away from using multiple pumps by teaching a single pump 42 that provides pressure that is great enough for desired operation. Therefore, one of ordinary skill in the art would not be motivated to combine Borman, Luibrand, and Bullard et al. to include two separate pumps. Few et al. also fails to teach or suggest two pumps, an automatic transmission

pump and a power steering pump, supplying hydraulic fluid from a single reservoir.

Moreover, none of the references teaches or suggests two pumps for pumping hydraulic fluid from a single reservoir, one pump for pumping the fluid at a relatively high pressure and the other pump for pumping the fluid at a relatively low pressure. The Office Action improperly relies on Few et al. for a teaching of a pump pumping fluid at relatively low pressure to an automatic transmission. According to Few et al., 50 psi is excessive pressure for a used fluid chamber of a transmission fluid exchange device having a new fluid chamber and a used fluid chamber. (Few et al., Col. 1, lines 50-55). Few et al. fails to include a teaching of the fluid pressure supplied to a transmission. The fluid pressure in a fluid exchange device located downstream of a transmission cannot be used to imply the fluid pressure upstream at the transmission. Thus, Few et al. includes no teaching of fluid pressure supplied to an automatic transmission. Since none of the references teach or suggest two pumps for pumping hydraulic fluid from a single reservoir, one pump for pumping the fluid at a relatively high pressure and the other pump for pumping the fluid at a relatively low pressure, it is respectfully requested that claim 13 be indicated as allowable.

Claim 14 includes the subject matter of previous claim 7. Claim 7 was rejected under 35 U.S.C. §103 as obvious over Borman in view of Luibrand in view of Bullard et al. in further view of Hayabuchi et al. It is respectfully submitted

that claim 14 is allowable over Borman, Luibrand, Bullard et al., and Hayabuchi et al., whether taken singularly or in combination.

New claim 14 recites that at least one pump comprises a single pump operative to output fluid at a pressure high enough to operate the power steering gear. A first output line directs hydraulic fluid at a relatively high pressure from the single pump to the steering gear. A second output line directs hydraulic fluid at a relatively high pressure from the single pump to a pressure reducer, and a third output line directs hydraulic fluid at a relatively low pressure from the pressure reducer to automatic transmission. None of Borman, Luibrand, Bullard et al., and Hayabuchi et al. teach or suggest a single pump that outputs fluid at a pressure high enough to operate a power steering gear and a pressure reducer receiving fluid from the single pump and directing relatively low pressure fluid to an automatic transmission. In rejecting claim 7, the Office Action states that Hayabuchi et al. (Fig. 1) discloses a pressure reducer for supplying low pressure fluid to a transmission. However, Hayabuchi et al. fails to teach or suggest that the fluid supplied to pressure-reducing means 943 or 944 is supplied from a single pump at a pressure high enough to operate a power steering gear. Borman, Luibrand, and Bullard et al. also fail to teach or suggest supplying fluid to a pressure reducer from a single pump at a pressure high enough to operate a power steering gear. Since none of Borman, Luibrand, Bullard et al., and Hayabuchi et al. teaches or suggests the features of claim 14, it is

respectfully requested that claim 14 be indicated as allowable.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Attached hereto is a marked-up version of the changes made to the specification and the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please amend the paragraph beginning on page 6 at line 14 as follows:

A transmission fluid pump 40 is connected with the reservoir 32 for pumping hydraulic fluid 30 between the reservoir and the automatic transmission 20. The apparatus 10 includes a plurality of automatic transmission fluid lines indicated schematically at [40] 42. The automatic transmission fluid lines 42 form a portion of a fluid flow path 44 of the hydraulic fluid 30 for operating the automatic transmission 20. The lines 42 interconnect and transmit fluid between the automatic transmission pump 40 and the internal parts of the automatic transmission 20. The automatic transmission pump 40 is illustrated as being integral with the reservoir 32. The automatic transmission pump 40 could, alternatively, be connected with the reservoir 32 by separate fluid lines (not shown).

Please amend the paragraph beginning on page 9 at line 15 as follows:

Specifically, fluid from the reservoir 30 flows through the filter 52 to the pump 60. The pump 60 outputs fluid at a relatively high

pressure of 1,000 to 1,750 psi, or whatever level is required by the power steering gear 12. A first portion of this relatively high pressure fluid is directed through a fluid line 62 to the power steering gear 12. A second portion of this relatively high pressure fluid is directed through another fluid line 64 to a pressure reducer 66. The pressure reducer 66 reduces the pressure of the fluid in the line 64 to a pressure that is suitable for use in the automatic transmission 20. This relatively low pressure fluid is directed through a fluid line [57] 68 to the automatic transmission 20.

IN THE CLAIMS:

Please amend claim 1 as follows:

1. (Amended) Apparatus comprising:

a hydraulic fluid operated automatic transmission for transmitting motive power from an engine of a vehicle to drive wheels of the vehicle;

a hydraulic fluid power assisted steering gear for effecting steering movement of steerable wheels of the vehicle, said steering gear including a fluid motor;

a body of hydraulic fluid for operating both of said automatic transmission and said steering gear;

a reservoir for storing a portion of said hydraulic fluid;

at least one pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission and said fluid motor; [and]

a cooler for cooling said hydraulic fluid, said at least one pump being operative to pump hydraulic fluid between said reservoir and said cooler; and

a filter for filtering said hydraulic fluid pumped to said automatic transmission and to said steering gear.

Please amend claim 5 as follows:

5. (Amended) Apparatus as set forth in claim [1] 13 wherein said at least one pump that is operative to pump hydraulic fluid between said reservoir and said cooler is said transmission fluid pump.

Please amend claim 6 as follows:

6. (Amended) Apparatus as set forth in claim [1] 13 wherein said transmission fluid pump is connected in line between said reservoir and said power steering pump, said apparatus including a first output line for directing hydraulic fluid at a relatively low pressure from said transmission pump to said transmission and a second output line for directing hydraulic fluid at a relatively high pressure from said power steering pump to said steering gear.

Please cancel claim 7 without prejudice or disclaimer.

Please amend claim 8 as follows:

8. (Amended) A method comprising the steps of:

providing a body of hydraulic fluid;

operating with the hydraulic fluid an automatic transmission to transmit motive power from an engine of a vehicle to drive wheels of the vehicle;

operating with the hydraulic fluid a power assisted steering gear to effect steering movement of steerable wheels of the vehicle, the steering gear including a fluid motor;

storing in a reservoir a portion of the hydraulic fluid that is used for operating both the automatic transmission and the steering gear;

pumping hydraulic fluid between the reservoir and the automatic transmission and the fluid motor; [and]

pumping hydraulic fluid between the reservoir and a cooler for cooling the hydraulic fluid; and

filtering the hydraulic fluid pumped between the reservoir and the automatic transmission and the hydraulic fluid pumped between the reservoir and the fluid motor.

Please rewrite allowable claim 4 in independent form as new claim 12 as follows:

12. Apparatus comprising:

a hydraulic fluid operated automatic transmission for transmitting motive power from an engine of a vehicle to drive wheels of the vehicle;

a hydraulic fluid power assisted steering gear for effecting steering movement of steerable wheels of the vehicle, said steering gear including a fluid motor;

a body of hydraulic fluid for operating both of said automatic transmission and said steering gear;

a reservoir for storing a portion of said hydraulic fluid;

at least one pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission and said fluid motor;

a cooler for cooling said hydraulic fluid, said at least one pump being operative to pump hydraulic fluid between said reservoir and said cooler,

said at least one pump comprising a transmission fluid pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission at a relatively low pressure, and a power steering pump connected with said reservoir and separate from said transmission fluid pump for pumping hydraulic fluid between said reservoir and said fluid motor at a relatively high pressure,

a plurality of power steering fluid lines interconnecting said power steering pump and said reservoir and said fluid motor for transmitting hydraulic fluid between said power steering pump and said reservoir and said fluid motor, said plurality of power steering fluid lines forming a fluid flow path of said hydraulic fluid for operating said steering gear that is connected in fluid communication with a

fluid flow path of said hydraulic fluid for operating said automatic transmission; and

a filter for filtering said hydraulic fluid, said filter being located in the fluid flow path of said hydraulic fluid for operating said automatic transmission and also being located in the fluid flow path of said hydraulic fluid for operating said steering gear.

Please cancel claim 4.

Please add new claim 13 as follows:

13. Apparatus comprising:

a hydraulic fluid operated automatic transmission for transmitting motive power from an engine of a vehicle to drive wheels of the vehicle;

a hydraulic fluid power assisted steering gear for effecting steering movement of steerable wheels of the vehicle, said steering gear including a fluid motor;

a body of hydraulic fluid for operating both of said automatic transmission and said steering gear;

a reservoir for storing a portion of said hydraulic fluid;

at least one pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission and said fluid motor; and

a cooler for cooling said hydraulic fluid, said at least one pump being operative to pump hydraulic fluid between said reservoir and said cooler,

wherein said at least one pump comprises a transmission fluid pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission at a relatively low pressure, and a power steering pump connected with said reservoir and separate from said transmission fluid pump for pumping hydraulic fluid between said reservoir and said fluid motor at a relatively high pressure.

Please add new claim 14 as follows:

14. Apparatus comprising:

a hydraulic fluid operated automatic transmission for transmitting motive power from an engine of a vehicle to drive wheels of the vehicle;

a hydraulic fluid power assisted steering gear for effecting steering movement of steerable wheels of the vehicle, said steering gear including a fluid motor;

a body of hydraulic fluid for operating both of said automatic transmission and said steering gear;

a reservoir for storing a portion of said hydraulic fluid;

at least one pump connected with said reservoir for pumping hydraulic fluid between said reservoir and said automatic transmission and said fluid motor; and

a cooler for cooling said hydraulic fluid, said at least one pump being operative to pump hydraulic fluid between said reservoir and said cooler,

said at least one pump comprising a single pump operative to output fluid at a pressure high enough to operate said power steering gear, a first output line for directing hydraulic fluid at a relatively high pressure from said single pump to said steering gear, a second output line for directing hydraulic fluid at a relatively high pressure from said single pump to a pressure reducer, and a third output line for directing hydraulic fluid at a relatively low pressure from said pressure reducer to said automatic transmission.